

Element Type 38: Channelized DS1 Line Port; TR-303 IDCU/IDT – (Install)

Definition: A channelized DS1 line port provides a path for 24 DS0's (POTS or ISDN/BRI) between the Integrated Digital Carrier Unit (IDCU/IDT) in the Local Digital Switch (LDS) and the CLEC Collocation space. The DS1 is initially provisioned and then 24 DS0's are migrated or augmented electronically onto the DS1 via recent change translations.

Objective: Install a DS1 channelized line port from the ILEC LDS switch to the CLEC collocation area.

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Fallout
- Copper Port Percentage
- Average Trip Time
- Number of Work Activities per Trip
- CO Staffed Ratio

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog ☐ Digital ☒.

Unbundled Port: Yes ☒ No ☐.

Examples of service used on this element type:

POTS
ISDN/BRI

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Technical Description:

With TR-303 IDLC, the SONET Optical Carrier 3 ("OC3") Fiber Feeder terminates (point to point or ring) on the Remote Terminal (RT). Typically, DS1 Traffic terminates on Integrated Digital Terminal ("IDT") and to a SONET Add Drop Multiplexer ("ADM"), both of which are located in the Wire Center. Because the technology is integrated, there is no need for a physical jumper for a DS0 between the ADM and collocated space. Only a DS1 is initially provisioned, and then the 24 DS0 channels are migrated or rolled electronically on the DS1. As the DS1 becomes full, then the DS1 is augmented for another 24 DS0 channels or time-slots (see exhibit on the following page).

Installation:

- Use of WFA
- Pull and analyze the order
- 4-Work Activities per trip
- Trip time to non-staffed CO Travel time within the CO
- Install 5 wire cross-connect at DSX
- Perform quasi random signal source - QRSS test via remote ITS-DTAU
- Close the order

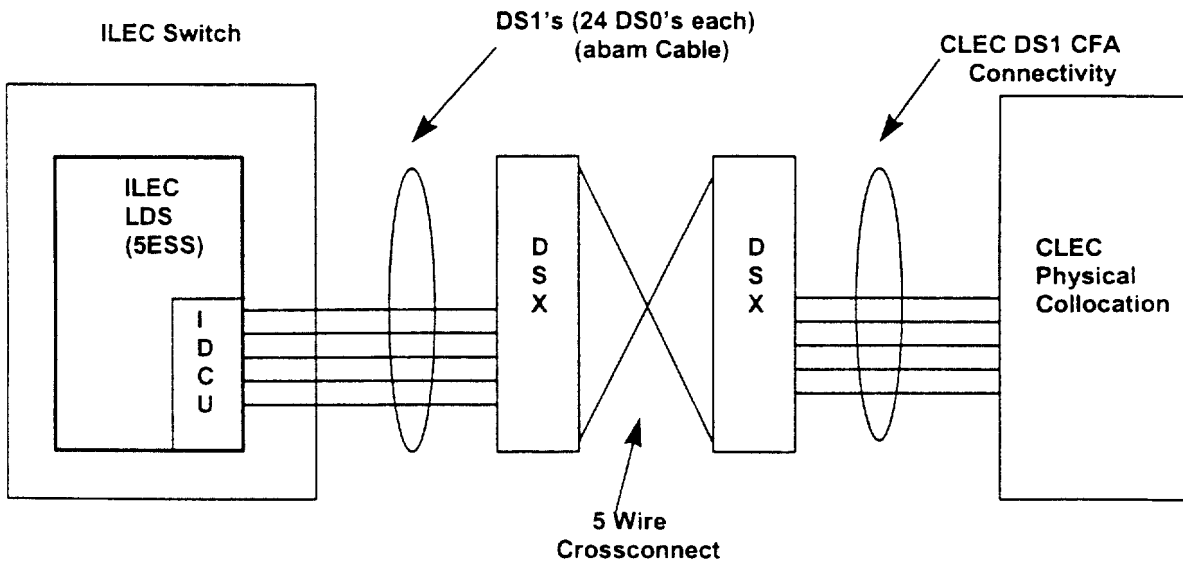
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Fallout:

It is assumed that fallout of the order will occur 2% of the time to the CPC. The activities include the following:

- Pull and analyze the order
- Clear the jeopardy

2 Wire (POTS or ISDN/BRI) Unbundled TR303 (IDLC) Line



Element Type 39: Channelized DS1 Line Port (TR-303 IDCU/IDT) - Disconnect

Definition: A channelized DS1 line port provides a path for 24 DS0's between the Integrated Digital Line Unit (IDCU/IDT) in the Local Digital Switch (LDS) and the CLEC Collocation space. The DS1 is initially provisioned and then 24 DS0's are migrated and/or augmented electronically to the DS1 via recent change translations.

Objective: Disconnect a DS1 channelized line port from the ILEC switch to the CLEC collocation area.

Environment:

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Fallout
- Copper Loop Percentage
- Average Trip Time
- Number of Work Activities per Trip
- CO Staffed Ratio

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog ☐ Digital ☒.

Unbundled Loop: Yes ☒ No ☐.

Examples of service used on this element type:

POTS
ISDN/BRI
IMB, IMR; 1FB, 1FR

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Technical Description:

With TR-303 IDLC, The SONET Optical Carrier 3 ("OC3") Fiber Feeder terminates (point to point or ring) on the Remote Terminal (RT). Typically, DS1 Traffic terminates on Integrated Digital Terminal ("IDT") and to a SONET Add Drop Multiplexer ("ADM"), both of which are located in the Wire Center. Because the technology is integrated, there is no need for a physical jumper for a DS0 between the ADM and collocated space. Only a DS1 is initially provisioned, and then the 24 DS0 channels are migrated or rolled electronically on the DS1. As the DS1 becomes full, then the DS1 is augmented for another 24 DS0 channels or time-slots.

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Disconnect:

- Use of WFA
- Pull and analyze the order
- 4-Work Activities per trip
- Trip time to non-staffed CO
- Monitor circuit for traffic busy and correct assignment
- Disconnect 5 wire cross-connect at DSX
- Close the order

Fallout:

It is assumed that fallout of the order will occur 2% of the time to the CPC. The activities include the following:

- Pull and analyze the order
- Clear the jeopardy

Element Type 40: Fiber Cross Connects – (Install)

Definition: A bi-directional 2 fiber, fiber-to-fiber connection through the LGX cross connect panel or fiber distribution panel (FDP).

Objective: Establish a fiber path from the collocated space to the CLEC point of interconnection (POI)

Environment:

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Average Trip Time
- Number of Work Activities per Trip
- CO Staffed Ratio

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog Digital x.

Unbundled Loop: Yes x No .

Examples of service used on this element type:

SONET OCn

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Technical Description:

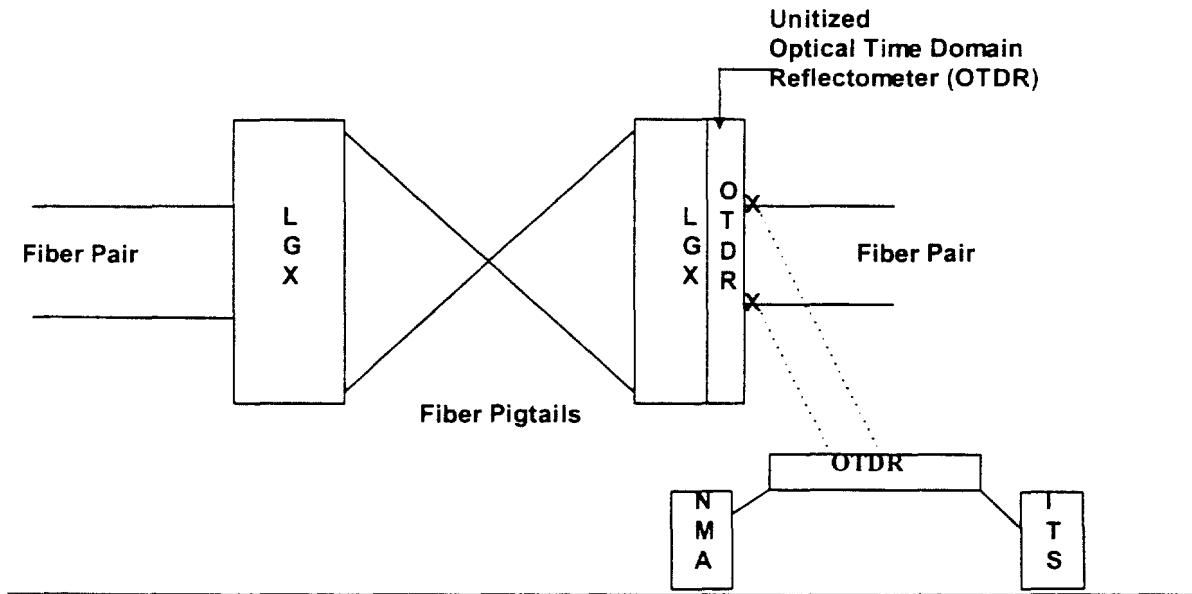
The NRCs associated with the 2-Fiber Entrance Facility consists of the time it takes to install the 2 fiber connectorized pig-tails (crossconnects) at the LGX cross connect panel. The Testing is assumed to take place – at the time of construction (EF&I) - remotely via an Intelligent OTDR system (e.g., Fiber-Check 5000 [FC-5000] type system). It is further assumed that data-basing of the system as well as the creation of the templates and inventory for the OTDR (FC-5000) system, and NMA surveillance OSS system are built at the time of construction (EF&I).

Installation:

- Use of WFA
- Pull and analyze the order (FMAC)
- 4-Work Activities per trip
- Trip time to non-staffed CO
- Travel time within the CO
- Install 2 fiber pigtails at LGX by FMAC
- Close the order

Fiber Crossconnect at LGX

Fiber Crossconnect



Element Type 41: Fiber Cross Connects – (Disconnect)

Definition: A bi-directional 2 fiber, fiber-to-fiber connection through the LGX cross connect panel or fiber distribution panel (FDP).

Objective: Disconnect a fiber path from the fiber loop to the CLEC point of interconnection (POI)

Environment:

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Average Trip Time
- Number of Work Activities per Trip
- CO Staffed Ratio

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog ☐ Digital ☒.

Unbundled Loop: Yes ☒ No ☐.

Examples of service used on this element type:

SONET OCn

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Technical Description:

The NRCs associated with the 2-Fiber Entrance Facility consists of the time it takes to disconnect the 2 fiber pig-tails (crossconnects) at the LGX cross connect panel.

Disconnect:

- Use of WFA
- Pull and analyze the order (FMAC)
- 4-Work Activities per trip
- Trip time to non-staffed CO
- Travel time within the CO
- Monitor circuit for traffic busy and correct assignment
- Disconnect fiber pigtails at LGX by FMAC
- Close the order FMAC

Element Type 42: SS7 Links; 56Kb/s DS0 – (Install)

Definition: A 56Kb/s DS0 SS7 signaling link between two SS7 signaling points.

Objective: Establish a DS0 signaling link for the transmission of signaling information between two SS7 signaling points.

Environment:

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Fallout
- Copper Loop Percentage
- Average Trip Time
- Number of Work Activities per Trip
- CO Staffed Ratio

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog ☐ Digital ☒.

Unbundled Loop: Yes ☒ No ☐.

Examples of service used on this element type:

SS7 Link

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

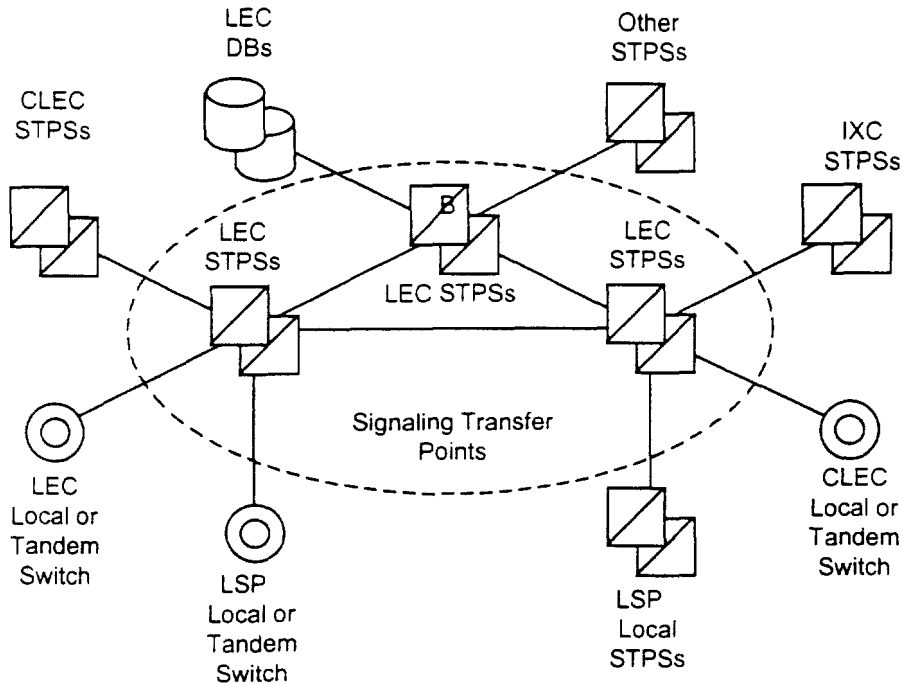
Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Technical Description:

Telecommunication carriers use an out-of-band signaling network to carry signaling messages for the processing and routing of telephone calls. The standard signaling system used today is the signaling system seven ("SS7") protocol. The SS7 system establishes a signaling link for the transmission of signaling information between SS7 signaling points. These Signaling Elements, illustrated in the figure below, include Signaling End Points, such as Signaling Switch Points (SSP), Service Control Points (SCP), and Signal Transfer Points (STP). The SS7 Links act as conduits of SS7 messages between all signaling points.

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Signaling Elements

- a. Signaling Links - Signaling Links are transmission facilities in a signaling network that carry "out-of-band" signaling messages, (i.e., Signaling between an end office and a Signal Transfer Point, between two signal transfer points, between a tandem switch and a signal transfer point, and between a signal transfer point and a Service Control Point). SS7 Signaling Links are characterized according to their use in the signaling network. Electrically, all links are essentially identical in that they are bi-directional data links. They can differ in speed from 56 kb/s (DS0) to 1.544 Mb/s (DS1). Access (A) links are links that interconnect an STP with a signaling end point. Today, an end point can be a SSP or a SCP. In essence the "A" link provides access to the SS7 signaling network. Links interconnecting two mated pairs of STPs are referred to as Diagonal (D) links whose sole function is to carry signaling traffic between signaling switches known as Signal Transfer Points (STP). "D" links connect a pair of STPs in a local network with STPs in a non-local network.
- b. Signal Transfer Point ("STP") - An STP acts as a signaling switch. It enables the exchange of SS7 messages between signaling end points (e.g., SSPs and SCPs).
- c. Service Control Point ("SCP") - An SCP is a database that permits the storage, access, and manipulation of information required to offer a particular service and/or capability. Deployed in an SS7 network, an SCP directs and processes informational requests and provides operational interfaces to allow for provisioning, administration and maintenance of subscriber data and service application data. (e.g., an 800 database which stores customer record data needed to route 800 calls).
- d. Switching Signaling Point ("SSP") - An SSP is a local digital switch that is SS7 compatible.

SS7 Element Assumptions:

Technical Description : For this element, there are NRCs associated with SS7 "A" Link (The Service Order driven cross-connection of the DS0 (56kb/s) or DS1 (1.544Mb/s) "A" link is the NRC Recent Change STP translations). This NRC is pertaining to the Point Code-to-Link-set, MTP routing translation, and Screening translation required at the ILEC control and mate STPs for the "A" link. In the case of the STP-to-STP ("D" link) relationship, both MTP routing translations and Screening translations have to be

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performed by both the ILEC and the CLEC STPs therefore mutually beneficial and an every day cost of doing business. The cost should be equal to both the ILEC and CLEC (Bill and Keep).

Installation:

- Use of WFA
- Pull and analyze order - SSC & NTEC
- Travel time to central office (non-staffed)/4 work activities
- Travel time within the CO / 4 work activities
- Cross connect (wire wrap to AD4 ADTS Channel Bank/unitized SMAS)
- Conduct SS7 test
- Conduct loop back analysis test
- Close order - SSC & NTEC

Fallout:

It is assumed that fallout of the order will occur 2% of the time to the CPC. The activities include the following:

- Pull and analyze the order
- Resolve fallout

Element Type 43: SS7 Links; 56Kb/s DS0 – (Disconnect)

Definition: A 56 Kb/s DS0 SS7 signaling link between two SS7 signaling points.

Objective: Disconnect a DS0 signaling link for the transmission of signaling information between two SS7 signaling points.

Environment:

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Fallout
- Copper Loop Percentage
- Average Trip Time
- Number of Work Activities per Trip
- CO Staffed Ratio

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog ☐ Digital ☒.

Unbundled Loop: Yes ☒ No ☐.

Examples of service used on this element type:

SS7 Links

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Please refer to 'Detailed Work Activity Descriptions' under Element Type 42.

Disconnect:

- Use of WFA
- Pull and analyze order - SSC & NTEC
- Travel time to central office (non-staffed)/4 work activities
- Travel time within the CO / 4 work activities
- Monitor circuit for traffic busy and correct assignment
- Disconnect cross connect (wire wrap to AD4 ADTS Channel Bank/unitized SMAS)
- Close order - SSC & NTEC

Fallout:

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It is assumed that fallout of the order will occur 2% of the time to the CPC. The activities include the following:

- Pull and analyze the order
- Resolve fallout

Element Type 44: SS7 Links; 1.544Mb/s DS1 – (Install)

Definition: A DS1 1.544Mb/s SS7 signaling link between two SS7 signaling points.

Objective: Establish a DS1 signaling link for the transmission of signaling information between two SS7 signaling points.

Environment:

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Fallout
- Copper Loop Percentage
- Average Trip Time
- Number of Work Activities per Trip
- CO Staffed Ratio

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog ☐ Digital ☒.

Unbundled Loop: Yes ☒ No ☐.

Examples of service used on this element type:

SS7 Links

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Please refer to 'Detailed Work Activity Descriptions' under Element Type 42.

Installation:

- Use of WFA
- Pull and analyze order - FMAC
- Travel time to central office (non-staffed)/4 work activities
- Travel time within the CO / 4 work activities
- Conduct continuity test - quasi random signal source - QRSS (QRSS) from ITS/DTAU
- Retrieve and analyze performance monitoring data
- Conduct SS7 test
- Close order

Fallout:

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It is assumed that fallout of the order will occur 2% of the time to the CPC. The activities include the following:

- Pull and analyze the order
- Resolve fallout

Element Type 45: SS7 Links; 1.544Mb/s DS1 – (Disconnect)

Definition: A DS1 1.544 Mb/s SS7 signaling link between two SS7 signaling points.

Objective: Disconnect a DS1 signaling link for the transmission of signaling information between two SS7 signaling points.

Environment:

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Fallout
- Copper Loop Percentage
- Average Trip Time
- Number of Work Activities per Trip
- CO Staffed Ratio

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog ☐ Digital ☒.

Unbundled Loop: Yes ☒ No ☐.

Examples of service used on this element type:

SS7 Links

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Please refer to 'Detailed Work Activity Descriptions' under Element Type 42.

Disconnect:

- Use of WFA
- Pull and analyze order - FMAC
- Travel time to central office (non-staffed)/4 work activities
- Travel time within the CO / 4 work activities
- Monitor circuit for traffic busy and correct assignment
- Close order - FMAC

Fallout:

It is assumed that fallout of the order will occur 2% of the time to the CPC. The activities include the following:

- Pull and analyze the order
- Resolve fallout

Element Type 46: SS7 STP Global Title Translations “A Link” Only – (Install)

Definition: SS7 signaling network dialed digit translation to Point Code capability. See technical description for details.

Objective: Establish an SS7 STP Global Title Translation.

Environment:

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Fallout

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog Digital .

Unbundled Loop: Yes x No .

Examples of service used on this element type:

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Technical Description:

Once the MTP translations are accomplished in the existing SS7 local elements, additional levels of translation can be employed. Global Title Translations (GTT) utilize the Signaling Connection Control Part (SCCP) of the SS7 protocol stack to enhance the services of the MTP. The addressing capability of MTP is limited to delivering a message to a node, as described above. SCCP supplements this capability by providing an addressing capability that uses DPCs plus Subsystem Numbers (SSNs). The SSN is local addressing information used by SCCP to identify each of the SCCP users at a node. Another addressing enhancement to MTP provided by SCCP is the ability to address messages with Global Titles, which are addresses, such as dialed digits, that do not explicitly contain information usable for routing by MTP. For Global Titles a translation capability is required in SCCP to translate the Global Title to a DPC + SSN. This translation function is commonly known as the Global Title Translation (GTT).

GTTs can be used in two forms. The Final global title translation (FGTT) or the Intermediate global title translation (IGTT). The FGTT results in the message being directed to the DPC + SSN of the final destination where service resides. The IGTT, however, results in the message being directed to a DPC of an intermediate signaling point. An example of an IGTT message might be between non-local networks. If a message originates at a SSP in one SS7 network destined for a SCP in another SS7 network, the originating network would direct the message to the destination network's gateway STP. This is the IGTT. The destination network's STP would perform a FGTT and route the message to the correct SCP within their SS7 network. Delivering messages in this manner allows for the segregation of routing administration between networks and re-engineering of services on the destination SCP.

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The Global Title Translation (GTT) is a function performed at an STP that translates on digits passed along within the protocol from the LDS switch (SSP). The outcome of the GTT activity is the address (Point Code and Sub-System Number (PC + SSN) of the SCP where the service resides. Once the GTT is complete and the PC + SSN is determined the STP performs a lookup in the PC to Link-set table to determine the correct link-set to send the message on it's way to the SCP that contains that service application (SSN).

Rationale for \$0.00 NRC for D Links:

Some ILECs modeled NRCs for Signaling Point Code Translations ("SPC") and Global Title Translations ("GTT"). The reason that New Entrants should oppose this NRC because in today's environment no ILEC (including SWBT) charges another ILEC, Independent Telephone Company ("ICO"), or an IXC (including AT&T and MCI) for SPC or GTT translations because every STP has to know how to route the call to a new switch or NPA, NXX, (the way in which a particular SS7 network provider establishes it's network routing is implementation sensitive. What me mean by this is that a SS7 network may chose to do GTT at their STPs where another may chose to have the SCP perform the GTT function and/or for one service the STP could perform GTT functionality and for another service the SCP could perform the GTT function within the same providers network) then a new LDS Common Language Location Identifier ("CLLI") is brought on line anywhere in the country. This is a common good for all of the industry and the customers they serve, otherwise customer A would not be able to call customer B just because B was cut over to a new ILEC switch, obtained a new NXX, or NPA. This is standard practice, business as usual in the telecommunications environment.

At the St. Louis Missouri Deposition Proceedings held on August 5th and 6th NRC workshop, SWBT admitted that GTT and Point Code translations are business as usual in today's environment and is carried out for routing calls to other RBOCs, ICOs, and IXCs every time a new switch is brought on line, and/or new NXXs and NPAs are added. In addition, the CLLI and SPC information are available for connection related (Trunk Groups between carriers) service, however the SCCP (connectionless services) SPC + SSN are typically unknown by another carrier and Intermediate Global Title Translation (IGTT) and Final Global Title Translation (FGTT) are used to traverse the SS7 network gateway STPs. As is a practical matter, when a given SS7 provider may need to re-engineer or balance it's SS7 network by moving service applications on SCPs to other locations within their SS7 network, they will benefit from the use of IGTT and FGTT.)

Installation for A Link Only

- Pull and analyze order
- Services - GTT translation (input into SEAS)
- Close order

Fallout:

It is assumed that fallout of the order will occur 2% of the time to the SCC. The activities include the following:

- Pull and analyze the order
- Resolve fallout

Element Type 47: SS7 STP Global Title Translations “A Link” Only- (Disconnect)

Definition: SS7 signaling network dialed digit translation to Point Code capability. See technical description for details.

Objective: Delete an SS7 STP Global Title Translation

Environment:

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Fallout

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog ☐ Digital ☐.

Unbundled Loop: Yes ☒ No ☐.

Examples of service used on this element type:

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Technical Description:

Once the MTP translations are accomplished in the existing SS7 local elements, additional levels of translation can be employed. Global Title Translations (GTT) utilize the Signaling Connection Control Part (SCCP) of the SS7 protocol stack to enhance the services of the MTP. The addressing capability of MTP is limited to delivering a message to a node, as described above. SCCP supplements this capability by providing an addressing capability that uses DPCs plus Subsystem Numbers (SSNs). The SSN is local addressing information used by SCCP to identify each of the SCCP users at a node. Another addressing enhancement to MTP provided by SCCP is the ability to address messages with Global Titles, which are addresses, such as dialed digits, that do not explicitly contain information usable for routing by MTP. For Global Titles a translation capability is required in SCCP to translate the Global Title to a DPC + SSN. This translation function is commonly known as the Global Title Translation (GTT).

GTTs can be used in two forms. The Final global title translation (FGTT) or the Intermediate global title translation (IGTT). The FGTT results in the message being directed to the DPC + SSN of the final destination where service resides. The IGTT, however, results in the message being directed to a DPC of an intermediate signaling point. An example of an IGTT message might be between non-local networks. If a message originates at a SSP in one SS7 network destined for a SCP in another SS7 network, the originating network would direct the message to the destination network's gateway STP. This is the IGTT. The destination network's STP would perform a FGTT and route the message to the correct SCP within their SS7 network. Delivering messages in this manner allows for the segregation of routing administration between networks and re-engineering of services on the destination SCP.

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The Global Title Translation (GTT) is a function performed at an STP that translates on digits passed along within the protocol from the LDS switch (SSP). The outcome of the GTT activity is the address (Point Code and Sub-System Number (PC + SSN) of the of the SCP where the service resides. Once the GTT is complete and the PC + SSN is determined the STP performs a lookup in the PC to Link-set table to determine the correct link-set to send the message on it's way to the SCP that contains that service application (SSN).

Rationale for \$0.00 NRC for D Links:

Some ILECs modeled NRCs for Signaling Point Code Translations ("SPC") and Global Title Translations ("GTT"). The reason that New Entrants should oppose this NRC because in today's environment no ILEC (including SWBT) charges another ILEC, Independent Telephone Company ("ICO"), or an IXC (including AT&T and MCI) for SPC or GTT translations because every STP has to know how to route the call to a new switch or NPA, NXX, (the way in which a particular SS7 network provider establishes it's network routing is implementation sensitive. What me mean by this is that a SS7 network may chose to do GTT at their STPs where another may chose to have the SCP perform the GTT function and/or for one service the STP could perform GTT functionality and for another service the SCP could perform the GTT function within the same providers network) then a new LDS Common Language Location Identifier ("CLLI") is brought on line anywhere in the country. This is a common good for all of the industry and the customers they serve, otherwise customer A would not be able to call customer B just because B was cut over to a new ILEC switch, obtained a new NXX, or NPA. This is standard practice, business as usual in the telecommunications environment.

At the St. Louis Missouri Deposition Proceedings held on August 5th and 6th NRC workshop, SWBT admitted that GTT and Point Code translations are business as usual in today's environment and is carried out for routing calls to other RBOCs, ICOs, and IXCs every time a new switch is brought on line, and/or new NXXs and NPAs are added. In addition, the CLLI and SPC information are available for connection related (Trunk Groups between carriers) service, however the SCCP (connectionless services) SPC + SSN are typically unknown by another carrier and Intermediate Global Title Translation (IGTT) and Final Global Title Translation (FGTT) are used to traverse the SS7 network gateway STPs. As is a practical matter, when a given SS7 provider may need to re-engineer or balance it's SS7 network by moving service applications on SCPs to other locations within their SS7 network, they will benefit from the use of IGTT & FGTT.)

Disconnect/Deletion for A Links Only

- Pull and analyze order
- Services - GTT translations input into SEAS/NET PILOT
- Close order

Fallout:

It is assumed that fallout of the order will occur 2% of the time to the SCC. The activities include the following:

- Pull and analyze the order
- Resolve fallout

Element Type 48: SS7 STP Message Transfer Part (MTP) "A Link" Only – STP Port (Install)

Definition: SS7 signaling network Message Transfer Part (MTP) Point Code (PC) addressing capability. See technical description for details.

Objective: Establish an SS7 STP Message Transfer Part (MTP) translation.

Environment:

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Fallout

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog ☐ Digital ☐.

Unbundled Loop: Yes ☒ No ☐.

Examples of service used on this element type:

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Technical Description:

The Signaling System 7 (SS7) network is designed to transport SS7 messages between various SS7 network elements and between SS7 networks. Each SS7 network element is identified by a unique name known as a Point Code (PC). Destination Point Code (DPC) is a routing code assigned to every signaling point in the SS7 network and is the address for a signaling node. With a known destination point code, the SS7 network can route messages to a node based on its point code (this is commonly referred to as MTP level routing within the SS7 protocol). In SS7 protocol terms, a given PC is either the Destination address (DPC) or the Origination address (OPC) when transporting a message from element to element in the SS7 network or between SS7 networks. The OPC and DPC are an integral fields of the Message Transfer Part (MTP), the first three levels of the SS7 protocol. **All** SS7 messages employ MTP level routing based on the Destination Point Code to reach the correct SS7 network element. The overall purpose of MTP is to provide a reliable transfer and delivery of signaling information across the signaling network.

When establishing MTP routing, there are two distinct signaling point types, the signaling end point (i.e., SSPs and SCPs) and the signaling switch (the STP). When a new SS7 network element is added to a SS7 network for the first time, it is given a PC that is assigned to that local network and that is also assigned to a specific mated pair of STPs in that local network. It is "A" link connected to that mated pair of STPs and the "A" links are added to a Linkset table within the STPs. At that time the MTP routing required for messages from existing SS7 elements to that new PC in the local network must be built. The MTP routing consists of determining the correct PC-to-Linkset assignment being made at each existing

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STP. In other words, when the new signaling end point is determined to be the DPC of a given message, the correct Linkset must be selected to send the message toward the new signaling end point.

Rationale for \$0.00 NRC for D Links:

Some ILECs modeled NRCs for Signaling Point Code Translations ("SPC") and Global Title Translations ("GTT"). The reason that New Entrants should oppose this NRC because in today's environment no ILEC (including SWBT) charges another ILEC, Independent Telephone Company ("ICO"), or an IXC (including AT&T and MCI) for SPC or GTT translations because every STP has to know how to route the call to a new switch or NPA, NXX, (the way in which a particular SS7 network provider establishes it's network routing is implementation sensitive. What me mean by this is that a SS7 network may chose to do GTT at their STPs where another may chose to have the SCP perform the GTT function and/or for one service the STP could perform GTT functionality and for another service the SCP could perform the GTT function within the same providers network) then a new LDS Common Language Location Identifier ("CLLI") is brought on line anywhere in the country. This is a common good for all of the industry and the customers they serve, otherwise customer A would not be able to call customer B just because B was cut over to a new ILEC switch, obtained a new NXX, or NPA. This is standard practice, business as usual in the telecommunications environment.

At the St. Louis Missouri Deposition Proceedings held on August 5th and 6th NRC workshop, SWBT admitted that GTT and Point Code translations are business as usual in today's environment and is carried out for routing calls to other RBOCs, ICOs, and IXCs every time a new switch is brought on line, and/or new NXXs and NPAs are added. In addition, the CLLI and SPC information are available for connection related (Trunk Groups between carriers) service, however the SCCP (connectionless services) SPC + SSN are typically unknown by another carrier and Intermediate Global Title Translation (IGTT) and Final Global Title Translation (FGTT) are used to traverse the SS7 network gateway STPs. As is a practical matter, when a given SS7 provider may need to re-engineer or balance it's SS7 network by moving service applications on SCPs to other locations within their SS7 network, they will benefit from the use of IGTT and FGTT.)

Installation for A Links Only

- Pull and analyze order
- MTP point code to link set translations
- Use of SEAS/Net Pilot OSS
- Translations to perform diagnostics and place in available and in-service state
- Close order

Fallout:

It is assumed that fallout of the order will occur 2% of the time to the SCC. The activities include the following:

- Pull and analyze the order
- Resolve fallout

Element Type 49: SS7 STP Message Transfer Part (MTP) "A Link" Only- STP Port (Disconnect)

Definition: SS7 signaling network Message Transfer Part (MTP) Point Code (PC) addressing capability. See technical description for details.

Objective: Delete an SS7 STP Message Transfer Part (MTP) translation.

Environment:

Key Drivers of Cost:

Variable Input

- Labor Rate
- Variable Overhead
- Fallout

Work Value Input

- Manual Work Step Times

High Level Process Overview:

Transmission Type: Analog ☐ Digital ☐.

Unbundled Loop: Yes ☒ No ☐.

Examples of service used on this element type:

Time Estimates: Activity times are based on estimates by a panel of Subject Matter Experts.

Sample Output: See Attachment A

Detailed Work Activities: See Attachment B

Detailed Work Activity Descriptions:

Technical Description:

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Disconnect/Deletion

- Pull and analyze order
- MTP point code to link set translations
- Use of SEAS/Net Pilot OSS
- Translations to place in an out of service state
- Close order

Fallout:

It is assumed that fallout of the order will occur 2% of the time to the SCC. The activities include the following:

- Pull and analyze the order
- Resolve fallout